Welch Allyn®
Kreativ®

Kuring and Bleaching Center

Instructions for Use

Please read this manual thoroughly
prior to first use

CAUTION: This device must only be
purchased by, or sold to, a licensed dentist.

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Chapter

1

1. Introduction and General Information

Introduction

The Kreativ Kuring and Bleaching Center is a high-intensity, filtered light source and optical delivery system. It produces curing light for photo-activated dental composites (400-505nm), and photo-activated bleaching formulations (400-545nm) at four times the rate of conventional light systems. The Kreativ Kuring Light cures photo-activated dental materials, such as those used in direct restorations, sealants, bonding agents, and primers.

Every attempt has been made to make this manual a comprehensive overview of the Kreativ Kuring Light system. **It is very important that you read this manual thoroughly before you attempt to set up or use the equipment**.

Purpose of this Manual

This manual should be thoroughly studied before installing and using the equipment. Please call your nearest authorized Welch Allyn / Kreativ service representative if you need additional information regarding installation, operation, or service of the instrument.

Chapter One provides an overview of the system, and covers the use of the manual, features of the Kreativ Kuring Light, specifications, and other general information. Also included in this chapter is a functional description of the unit, which includes a diagram of all user interfaces, controls, and related items.

Chapter Two is a listing of all product Warnings and Cautions. Warnings relate to issues that could be harmful to either the user or the patient, while Cautions cover issues that could unnecessarily damage the equipment. **Please pay special attention to this chapter**.

Chapter Three covers the initial unpacking, set-up, and operational verification of the unit. This section should also be referred to whenever

the unit is moved from one location to another or stored for extended periods of time.

Chapter Four is an operational description of the Kreativ Kuring Light.

Chapter Five covers recommended methods of sterilizing and cleaning the system.

Chapter Six provides preventive maintenance and troubleshooting procedures. Also included is a replacement part and accessory list for re-ordering your supplies.

Chapter Seven is the warranty policy for the Kreativ Kuring Light.

General Information and Features

The Kreativ Kuring Light offers the benefit of a rapid cure at a lesser entry, operation, and maintenance expense than an argon laser. Kreativ has developed a light source that combines long life and high lumen output within the spectral bandwidths required for both composite polymerization and power bleaching.

The unit uses a proprietary lamp to produce energy in the visible spectrum. This light energy is passed through special dichroic band-pass filters that pass energy in either the 400-505nm (composite curing) or 400-545nm (power bleaching) range. This custom filtering delivers the bandwidth of light matching the response curve for the photo-initiators in photocured dental material or bleach activation.

Other features of the Kreativ Kuring Light include:

- Verify On Demand using the integrated front panel Radiometer. This allows for quick and accurate verification of the light output level prior to use
- Lamp calibration using the front panel Radiometer. Calibration is required after replacing the lamp
- Microprocessor control for continuous output regulation, system monitoring, and status notification
- Detachable Curing Tip permits autoclave (super-heated, high-pressure steam) sterilization
- Three-digit LED readout for monitoring power output and displaying the exposure time
- Visual and audio signals indicating exposure time
- Convenient footswitch control

- Safety interlocks which prevent lamp operation if the Liquid Light Guide is not properly installed or if the lamp access door cover is not properly in place

Kuring Light Instrument Drawing

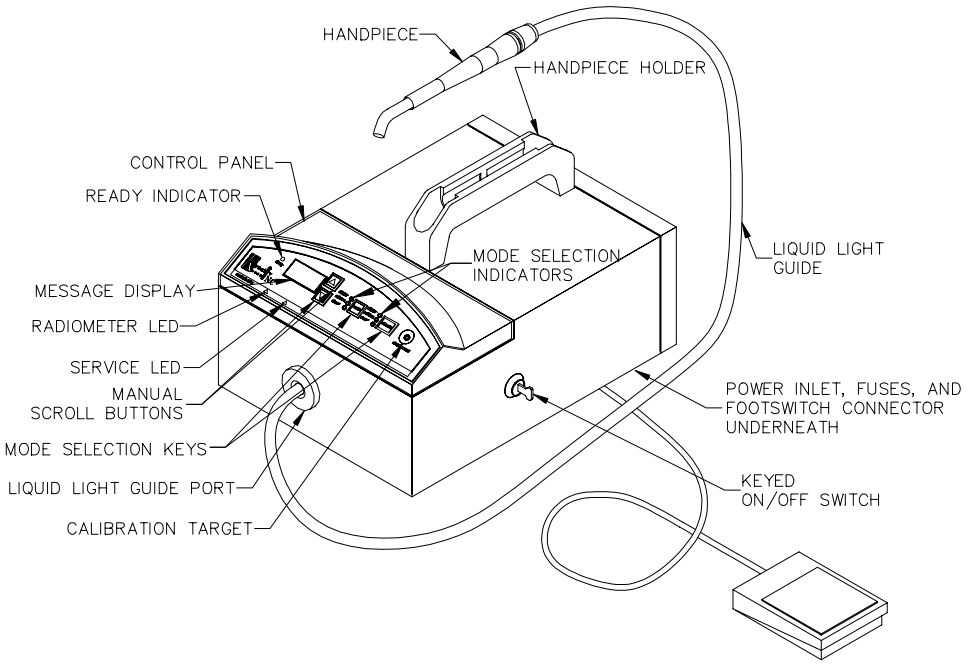

Figure 1

Functional Description

Control Panel - This panel contains all modes of control and interface with the user. Removability facilitates the replacement of the lamp.

Ready Indicator - Indicates when the unit is in "Ready" mode, and available for use.

Message Display – Displays exposure time, lamp output power, and various system messages to the user.

Radiometer LED – This LED is lit to indicate the radiometer is in use.

Service LED – If this LED is lit, please refer to the troubleshooting section of this manual.

Manual Scroll Keys - These keys are used to enter the calibration mode.

Mode Selection Keys - The keys allow the user to change the curing and bleaching mode of the system.

Calibration Target - This front panel window allows user verification and calibration of the system. For best results, please read and follow the calibration and verification instructions carefully.

Mode Selection Indicators - These lights indicate the currently selected curing or bleaching mode of the system.

Liquid Light Guide Port - The Liquid Light Guide interconnects here. Please ensure proper connection prior to using the system.

Footswitch – The footswitch activates the Kuring lamp when the Ready Indicator is lit.

Power Inlet, Fuses and Footswitch Connectors - These connectors are located underneath the system.

Keyed On/Off Switch - This switch must be in the "on" position (indicated by the **I** symbol, see page 9) for the system to be used.

Liquid Light Guide – The Liquid Light Guide transmits the light energy from the Kuring unit to the Handpiece. SPECIAL CARE SHOULD BE TAKEN NOT TO KINK OR SHARPLY BEND THE LIQUID LIGHT GUIDE. Refer to the appropriate section of this manual for care and cleaning of the light guide.

Handpiece – The Handpiece is used to direct the light output onto the intended target.

Handpiece Holder - This holds the Handpiece when not in use.

Specifications

For further technical information, please contact your nearest authorized Welch Allyn / Kreativ service representative.

Power Input	100-240 V~, 50/60 Hz, 4-1.6 A
240 V Operation	In the U.S. only, 240 Vac operation must be with a center-tapped, single-phase supply circuit.
Weight	6.35 kg (14 lbs.)
Dimensions	19.7cm H x 35.5cm L x 24cm W (7.75” x 14” x 9.5”)
Beam Delivery	1.7 meter (6’) Liquid Light Guide with detachable Handpiece and Curing Tip
Curing Power Output	Approx. 0.25-1.40 W/cm^2 (depending on mode selection)

Available Output Spectrums

Curing Mode	400 – 505 nm
Bleaching Mode	400 – 545 nm

Operating Environmental Limitations

Temperature	+10° C to 40° C (50° F to 104° F)
Humidity	10 % to 90 % non-condensing
Pressure	50 kPa to 106 kPa (7.25 to 15.37 psia)

Storage/Transport Environmental Limitations

Temperature	+10° C to 50° C (50° F to 122° F)
Humidity	10 % to 90 % non-condensing
Pressure	50 kPa to 106 kPa (7.25 to 15.37 psia)

Electrical Fuses: Littelfuse, Slo Blo

Model	**Fuse Mfr.**	**Mfr. P/N**	**Kreativ P/N**	**Fuse Rating**
Kuring Light Domestic and European	Littelfuse	Type 218-02.5	600101	5A, 250Vac

Chapter

2

2. Safety

Warnings

WARNING: Do not look directly into the light exit window, the end of the Liquid Light Guide, or the end of the Curing Tip.

WARNING: Use only Kreativ safety goggles, which have been matched with the Kreativ Kure Light wavelength and power intensity, to provide proper eye protection. Failure to follow these precautions can result in temporary and/or permanent eye damage. All persons in the vicinity of the Kure Light must wear safety eyewear.

WARNING: Do not expose soft tissues unnecessarily to the direct output from the Curing Tip. The light from this and other visible curing lamps is absorbed in soft tissues, causing mild heat.

WARNING: Do not attempt to internally service the Kure Light. Failure to heed this warning may result in equipment damage and/or personal injury.

WARNING: If the lamp or reflector breaks, the glass pieces are very sharp. Handle with extreme care.

WARNING: It is the user's responsibility to determine that the operating environment is free of flammable or dangerous chemicals, and that it is safe to operate the Kure Light.

WARNING: Prior to every use, inspect the Curing Tip for damage. Ensure that the output surface is smooth and even and free from sharp edges. Never use a Curing Tip that has been damaged.

Cautions

CAUTION: Do not use any light guide other than the Liquid Light Guide supplied by Kreativ, and do not attempt to operate the unit with the Liquid Light Guide removed.

CAUTION: Protect the Liquid Light Guide from being crushed or tightly bent. Do not bend tighter than a 6-inch radius. Do not autoclave the Liquid Light Guide.

CAUTION: The Handpiece and Curing Tip should not be exposed to disinfecting or chemical autoclaving solutions (vapo-sterile or formaldehyde based solutions) which can result in discoloration and damage.

CAUTION: To avoid unintentional activation when not in use, shut the unit off and remove the key.

CAUTION: This device should only be purchased by, or sold to, a licensed dentist.

CAUTION: Clean the front panel Radiometer target area with isopropyl alcohol before it is to be used to calibrate or verify light output levels.

CAUTION: If the unit has been dropped, unplug and safety check it very thoroughly for loose or damaged parts before using it again.

CAUTION: When curing Kreativ PowerBlock, the Curing Tip should be held no closer than 2 cm (0.8”).

Product Safety Labeling

Type B equipment (defines the degree of protection against electrical shock)

Refer to Operator’s Manual

Caution - Heat

Alternating Current (AC)

Off

On

Recycling Instructions

Device:

- Bottom pan and top cover of the housing should be recycled as steel or aluminum.
- Plastic parts should be removed from the metal pads before recycling (e.g., power inlet, footswitch connector, main switch, etc.)
- All printed circuit boards should be recycled as electronic devices.

Accessories:

- All spare parts should be recycled according to the instructions above.
- Products that have been in contact with the patient need to be cleaned and sterilized as described in this manual.

Packaging:

- The carton, all other plastics, and inserts should be recycled (cardboard, foam, polyethylene).

ALL RECYCLING MUST BE IN COMPLIANCE WITH THE RELEVANT NATIONAL LAWS. GOVERNMENT AUTHORIZED RECYCLING CENTERS MUST BE USED.

ENVIRONMENTAL RELEVANT MATERIALS:

COMPONENTS	**LIST OF MATERIALS**
Enclosure and all brackets	Steel, Aluminum FR ABS, Delrin
Printed Circuit Boards	Epoxy FR4
Light Pipes	Steel Aluminum Glass Saline Solution Fluoropolymer Tubing

THERE ARE NO HAZARDOUS MATERIALS PRESENT IN THIS PRODUCT.

Chapter

3

3. System Unpacking, Setup, and Operational Verification

Unpacking

Carefully remove the unit from the shipping container and inspect for shipping damage. Should any sign of shipping damage be evident, please contact your nearest authorized Welch Allyn / Kreativ service representative immediately. Keep all shipping containers in the unlikely event that the unit needs to be returned for repair.

Set-up

WARNING: Use only Kreativ safety goggles, which have been matched with the wavelength and power intensity of the instrument to provide proper eye protection. Failure to follow these precautions can result in temporary and/or permanent eye damage. All persons in the vicinity of the Kure Light must wear safety eyewear.

WARNING: To prevent damage to the eye, do not look directly into the light exit window, the end of the Liquid Light Guide, or the end of the Curing Tip.

Verify receipt of all appropriate accessories using the checklist enclosed with your Kuring Light.

Plug the footswitch cable connector into the bottom of the Kuring Light.

Plug the AC power cord into the bottom of the unit. It is important that this is plugged in tightly to the Kuring Light. Plug the other end into a properly grounded AC wall socket of the correct voltage. If a wall switch activates the AC outlet, be sure this switch is “on” and the outlet has power.

Clean the Liquid Light Guide and Handpiece. To do this, use isopropyl alcohol on a cotton swab and clean both ends of the light guide. Be sure to swab both the tip of the Handpiece as well as the internal window to which the light guide couples.

Daily cleaning of the light guide and Handpiece is important for proper system performance.

Install the longer metal coupling of the Liquid Light Guide into the front of the Kuring Light console. Be sure it is inserted all the way into the console. Insert the shorter end of the light guide into the Handpiece.

When positioning the Kuring Light for use, be sure that it is positioned so that the Liquid Light Guide is not subject to extreme bends. Whenever possible, face the light guide output of the console towards the working area, thus reducing the necessary bending of the light guide.

If the light guide is bent too severely it may be kinked and cause permanent damage.

Operational Verification

Once the unit has been set up, turn the unit on. The keyed power switch is located on the side of the unit.

Calibration: When you first receive the unit, it is recommended that you perform a lamp calibration. Calibration should be performed whenever Verify On Demand indicates decreased output levels.

To perform a calibration:

1. Clean the Liquid Light Guide, Handpiece and the Radiometer Target before attempting to calibrate. DO NOT use steri-shield sheaths when calibrating.
2. Put on safety goggles.
3. Operate the unit for at least 1 minute to achieve proper operating temperatures.
4. From the ready state ("On" is displayed), press either scroll key until the "CAL" message appears.
5. Hold the flat tip of the Handpiece flush against the front panel Radiometer Target.
6. Press the footswitch and hold it down. Notice that light output will change color towards the end of the procedure. The lamp will automatically turn off and the digital readout will display the word "On".
7. When the word "On" is displayed, calibration is complete.

Once calibration is complete, you can verify the light output of the system.

Verify On Demand - "Verify On Demand" is used to check the power output of the light on a regular basis. It is recommended that you **verify light output at least once per day, and before every bleaching procedure**.

To perform a verification:

1. Clean Liquid Light Guide and Handpiece. Do NOT use steri-shield sheaths when performing the verification.
2. Put on safety goggles.
3. Turn the unit ON.
4. Verify On Demand can be used in any mode *except* Ramp.
5. From the ready state ("On" is displayed), depress the footswitch to activate the lamp and wait five seconds.
6. After the lamp has been on for five seconds or more, move the tip of Handpiece flush onto the calibration target. The output level will be continuously read and displayed for 5 seconds, after which the maximum value achieved during the reading will be displayed.
7. The following are nominal Watts/cm^2 readings for each mode:

Kure Modes:	Nominal	(Useable Minimum)
Ramp Kure	*Verify Not Available*	
Normal Kure	1.0 Watts/cm^2	(0.80 W/cm^2 min.)
Boost Kure	1.2 Watts/cm^2	(1.00 W/cm^2 min.)
Bleach Modes:		
Comfort Bleach	1.0 Watts/cm^2	
Normal Bleach	1.2 Watts/cm^2	(1.00 W/cm^2 min.)
Boost Bleach	1.4 Watts/cm^2	(1.20 W/cm^2 min.)

Once the light output meets the expected verification value, the system is validated at normal levels and is ready to use.

Chapter

4

4. Operating Instructions

Operation

WARNING: Use only Kreativ safety goggles, which have been matched with the wavelength and power intensity of the instrument to provide proper eye protection. Failure to follow these precautions can result in temporary and/or permanent eye damage. All persons in the vicinity of the Kuring Light must wear safety eyewear.

WARNING: When curing Kreativ PowerBlock, the Curing Tip should be held no closer than 2 cm (0.8").

Before each use, check the Curing Tip surface to ensure it is clean and without damage or sharp edges. Verify proper light output using the "Verify On Demand" feature. Light output should be at the nominal values depending on the selected mode.

Place the Curing Tip within 4 mm (0.16") of the restorative material, sealant, primer, bonding agent, or bleach. Be sure to follow the specific instructions included with the material to be photo-activated.

Your Kuring Light comes with two Handpieces with 8.0 mm Curing Tips.

Curing Mode

Kreativ Inc., a subsidiary of Welch Allyn, offers a comprehensive line of economical, easy to use, high quality MicroDentistry products designed specifically for best results with the Kreativ Kuring and Bleaching Center you now own.

We are proud of our line of restorative materials, sealants, primers, bonding agents and PowerGel™ photo-specific bleach, and we encourage all of our customers to try them. We are confident that you will appreciate the difference. A complete list of our available MicroDentistry products is included with your Kuring Light.

Consult the material manufacturer's instructions for the recommended curing time.

Using the Mode Selection Keys, select the Mode you desire. Press the footswitch to initiate the cycle. The unit will beep at the beginning and every 5 seconds thereafter. The exposure time for the cycle is displayed in seconds.

Normal Kure Mode

5 seconds with the Kreativ Kuring Light equals **20 seconds** with a conventional curing light.

Use the Kreativ Kuring Light for 5 seconds when the manufacturer's recommendation is 20 seconds for the curing of a material. This timing is achieved by releasing the footswitch when the first 5-second beep is heard.

10 seconds with the Kreativ Kuring Light equals **40 seconds** with a conventional curing light.

When the manufacturer's recommendation is 40 seconds for the curing of a material, using the Kreativ Kuring Light for 10 seconds will equal a full curing cycle. This timing is indicated by the second 5-second beep.

Boost Kure Mode

This mode increases the curing rate approximately 20% from Normal Mode. This mode may be used when it is felt that extra power or faster curing is required.

Ramp Kure™ Mode

This mode utilizes the microprocessor to “ramp’ the lamp power over a specific time period. This type of curing process optimizes the physical characteristics of the restoration by precisely controlling the rate of the

polymerization process. This reduces micro-gapping and shrinkage and ensures the highest degree of polymerization possible.

Ramp Kure will work well with most common composites, but it has been specifically programmed for Kreativ's MicroFlow™ composite material. Please contact your nearest authorized Welch Allyn / Kreativ service representative for more information.

Bleaching Mode

Consult the manufacturer's directions for the appropriate activation time. The Kreativ Kuring Light has wavelength limiting filters designed specifically for photo-thermal accelerators, such as Kreativ's PowerGel™ photo-specific bleach.

Kreativ PowerGel will give you the best bleaching results with your new Kuring Light due to its photo-specific chemistry. It is the perfect complement to your new Kuring Light.

Depress the footswitch to initiate the cycle. The unit will beep at the beginning and every 60 seconds thereafter. The exposure time, in minutes and seconds, is displayed.

Normal Bleach Mode

The Kreativ Kuring Light generally produces the same results as a conventional visible light source in one-fourth (25%) of the time.

Boost Bleach Mode

This mode increases the light output power (i.e., photo-thermal energy) approximately 20% above the Normal Bleach Mode. Use this mode when extra power or faster activation is desired.

Comfort Bleach Mode

This mode provides a reduced lamp output from the Normal Bleach Mode. This creates a slower photo-thermal activation of the bleach and may increase the comfort of patients with certain types of sensitivity.

Lamp Calibration

Calibration: When you first receive the unit, it is recommended that you perform a lamp calibration. Calibration should be performed whenever Verify On Demand indicates decreased output levels, or after replacing the lamp.

To perform a calibration:

1. Clean the Liquid Light Guide, Handpiece and the Radiometer Target before attempting to calibrate. DO NOT use steri-shield sheaths when calibrating.
2. Put on safety goggles.
3. Operate the unit for at least 1 minute to achieve proper operating temperatures.
4. From the ready state ("On" is displayed), press either scroll key until the "CAL" message appears.
5. Hold the flat tip of the Handpiece flush against the front panel Radiometer Target.
6. Press the footswitch and hold it down. Notice that light output will change color towards the end of the procedure. The lamp will automatically turn off and the digital readout will display the word "On".
7. When the word "On" is displayed, calibration is complete.

Once calibration is complete, you can verify the light output of the system.

Verify On Demand

Verify On Demand is used to check the power output of the light on a regular basis. It is recommended that you **verify light output at least once per day, and before every bleaching procedure**.

To perform a verification:

1. Clean Liquid Light Guide and Handpiece. Do NOT use steri-shield sheaths when performing the verification.
2. Put on safety goggles.
3. Turn the unit ON.
4. Verify on Demand can be used in any mode *except* Ramp.

5. From the ready state ("On" is displayed), depress the footswitch to activate the lamp and wait five seconds.
6. After the lamp has been on for five seconds or more, move the tip of Handpiece flush onto the calibration target. The output level will be continuously read and displayed for 5 seconds, after which the maximum value achieved during the reading will be displayed.
7. The following are acceptable minimum Watts/cm^2 readings for each mode:

Kure Modes:	Nominal	(Useable Minimum)
Ramp Kure	*Verify Not Available*	
Normal Kure	1.00 Watts/cm^2	(0.80 W/cm^2 min.)
Boost Kure	1.20 Watts/ cm^2	(1.00 W/cm^2 min.)
Bleach Modes:		
Comfort Bleach	1.00 Watts/cm^2	
Normal Bleach	1.20 Watts/cm^2	(1.00 W/cm^2 min.)
Boost Bleach	1.40 Watts/cm^2	(1.20 W/cm^2 min.)

Chapter

5

5. Sterilization & Cleaning

Sterilization

CAUTION: The Liquid Light Guide should **not** be subjected to autoclaving, as this will damage the light guide.

CAUTION: The Handpiece should **not** be subjected to ultrasonic cleaning prior to autoclaving.

CAUTION: The Handpiece and Curing Tip should **not** be exposed to disinfecting or chemical autoclaving solutions (vapo-sterile or formaldehyde based solutions) which can result in discoloration and damage.

The Handpiece and Curing Tip can be protected from contamination and patient contact with the steri-shield sheath. Discard the sleeve after each use and replace it with a new one prior to next patient usage. Ensure that the sleeve fits snugly over the output end of the Handpiece.

If the sheath has been jeopardized, or there is any patient contact above the sheath, sterilization of the Handpiece must be performed using a conventional dental autoclave. Placing the Handpiece in a sealed autoclave bag is recommended.

PLEASE NOTE: The steri-shield sheaths do reduce light output. The Curing Tips and Handpiece are autoclavable and may be used without a sheath if desired, as long as proper asepsis standards are maintained.

After the sterilization process, the input and output faces of the Curing Tip should be examined for contamination and any sharp edges at the tip. These faces may be cleaned by gently wiping with de-ionized water followed by isopropyl alcohol, using a lint-free wipe or cotton swab.

Cleaning

CAUTION: Always turn off the unit and unplug it prior to cleaning.

CAUTION: Do not use solvents or sharp instruments to clean the unit.

CAUTION: Never apply aerosol or pump sprays directly or near the Kreativ Kuring Light. Airborne sprays can contaminate the optics.

The Liquid Light Guide, the Curing Tip, and the Handpiece should be wiped with de-ionized water using a lint-free wipe or cotton swab, followed by isopropyl alcohol between each use.

The front panel Calibration Target should be cleaned with isopropyl alcohol before verifying the light output between patients.

Unit surfaces (except for light ports) may be cleaned with commercial cleaning products, including mild, non-abrasive household cleaners.

Aerosol or pump sprays should not be used near the Kreativ Kuring Light. Airborne sprays can contaminate the optics. If spray cleaners are used, spray them onto a soft, clean cloth and use that as an applicator. Never clean with harsh chemicals, abrasives, or detergents.

Chapter

6

6. Preventive Maintenance and Troubleshooting

Preventive Maintenance

WARNING: Always turn off the unit and unplug it prior to performing any maintenance.

The Kreativ Kuring Light has been designed to be trouble-free and easy to use. Standard cleaning procedures will keep your Kreativ Kuring Light looking new for years to come. Periodic inspection of the power cord and Liquid Light Guide is prudent. If any of these parts appear worn contact your authorized Welch Allyn / Kreativ Service Center for replacement parts.

Care should be taken to follow the cleaning and sterilization procedures in Chapter 5. Deviation from these procedures can result in damage to optical components, jeopardizing the unit's performance.

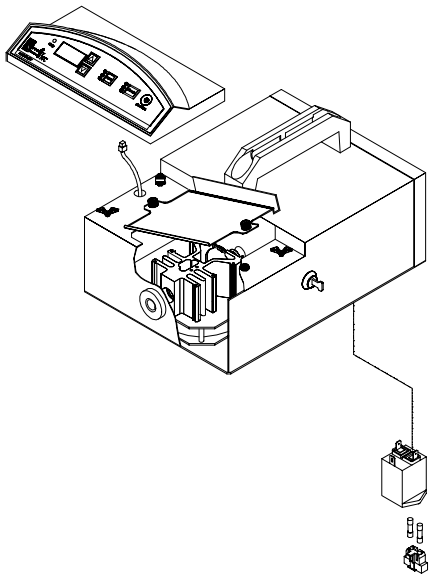

Figure 2

Changing the Lamp

WARNING: If the lamp or reflector breaks, the glass pieces are very sharp. Handle with extreme care.

CAUTION: When handling the lamp do **not** touch the inside of the reflector or the burner. Only touch the outside of the reflector.

Kreativ has developed the Light Source (lamp) to optimize light output and minimize infrared energy delivered to the patient. Substitution of any lamp other than those supplied by Kreativ will limit effectiveness, may damage the system, and possibly deliver inappropriate energy levels to the patient. In addition, the use of any lamp other than those supplied by Kreativ will void any warranty.

To remove the old lamp:

1. Allow the cooling fan to run for at least three minutes before continuing.
2. Turn the unit off and unplug it.
3. Pull off the control panel as shown in Figure 2.
4. Turn the two thumbscrews holding the lamp door counterclockwise to free the lamp door. Remove the lamp door.
5. Using the tip of one finger, pull back and up on the edge of the lamp reflector (be sure it has cooled first). The lamp will be unseated and released by the two retaining fingers.
6. Pull the lamp reflector and its connector out of the unit.
7. Unplug the lamp from its electrical connector.

To install the new lamp:

CAUTION: When handling the lamp do **not** touch the inside of the reflector or the burner. Only touch the outside of the reflector.

1. Plug the lamp into the electrical connector, ensuring a firm fit. *Be careful not to touch the inside of the reflector or the bulb portion of the lamp (burner).*
2. Find the tab on the edge of the reflector. This indicates the top of the bulb.
3. Slide the bulb down between the retaining fingers and the lamp mount, being sure that the tab on the reflector remains positioned at the top.
4. The bulb will fit flat into the circular seat when installed properly.
5. Ensure the lamp connecting wires are located away from the fan blades.

6. Replace the lamp door and retain with the thumbscrews (turn clockwise to tighten).
7. Replace the control panel.
8. Plug the unit in and perform a Lamp Calibration Procedure (page 17), then a Verify on Demand Procedure (page 17) to verify light output.

Changing the Fuses

To check/change the fuses (see Figure 2 on page 21):

1. Turn the unit off and unplug it from the wall outlet.
2. Turn the unit over and remove the power cable from its socket underneath the unit.
3. Next to the power cable socket is a flat black rectangular area. Using a small flat blade screwdriver, pry this black rectangle away from the unit.
4. The two (2) fuses are now free for inspection. If they appear damaged, replace only with fuses of the same type and rating. See page 7 for fuse specifications and part numbers to use when ordering.
5. Install by reversing the above procedure.
6. PLEASE NOTE: Frequent fuse blowing indicates a more serious electrical problem. Please discontinue use, unplug the unit, and contact your nearest authorized Welch Allyn / Kreativ service representative.

Troubleshooting

The only user-serviceable parts in the Kreativ Kuring Light are the lamp and AC fuses. The following table is intended to assist in communicating with the your authorized Welch Allyn / Kreativ service representative.

CONDITION:	THINGS TO DO:
Unit won't power up	• Check that power cord is plugged in • Check On/Off switch • Check fuses (see instructions) • Ensure that cable is plugged into the Control Panel.

“E01” is displayed	• Change the lamp (see instructions)
“E02” is displayed	• Verify the lamp access door is snapped in place and the Liquid Light Guide is fully plugged into its receptacle
“E03” is displayed	• Restart the unit; if problem continues, replace lamp
“E08” is displayed	• Ensure that cable is securely plugged into the Control Panel
“E11” is displayed	• Check that the fan is working; wait for cool down, restart unit
“E12” is displayed	• Release footswitch and restart
“E14” is displayed	• Tip was not on Radiometer target before footswitch was depressed; release footswitch and start calibration over. • Tip was not left on Radiometer target long enough during calibration; restart the unit and leave the Tip in place until the calibration is completed
“E15” is displayed	• There is an optical filter selection error during calibration. Be sure unit is in Kure Normal mode, re-calibrate
“E03”, “E06”, “E10” during calibration	• Repeat calibration; be sure the Tip and the Radiometer surface are clean • Ensure that no sheath is being used on the tip during calibration • Be sure the Tip is centered on the Radiometer window during calibration
Any other “Error Code”	• Call your nearest authorized Welch Allyn / Kreativ service representative.
Unit will not reach “Ready” state	• Call your nearest authorized Welch Allyn / Kreativ service representative.

Service LED is turned on	• Call your nearest authorized Welch Allyn / Kreativ service representative.
Light Guide and Curing Tip will not connect properly	• Call your nearest authorized Welch Allyn / Kreativ service representative.
Light Guide ends or the Curing Tip end appear scratched or damaged	• Call your nearest authorized Welch Allyn / Kreativ service representative.

Kuring Light Parts/Accessories

Description	Reorder #
Replacement Lamp	170134
Handpiece Assembly 8mm	135001-2
Liquid Light Guide 1.7m	210098
Orange Safety Goggles	140016
Steri Shield Sheaths	140017
Safety Cone, 8mm Tip	210126
Tack Tips, 8mm	600160
Footswitch Assembly	180063
Fuse, 5 A, 250 V	600101

In-Office Power Bleaching

PowerGel™ Bleach, 2 arch kit	130102
PowerGel™ Bleach, 8 arch kit	140020
PowerBlock Gingival Barrier (4)	140026
Cheek Retractors, small	480064
Cheek Retractors, medium	480067
Cheek Retractors, large	480066

MicroDentistry Products

Please call your Welch Allyn / Kreativ sales representative for a complete selection of our superior MicroDentistry products.

Chapter

7

7. Warranty, Returns and Adjustments

Returns and Adjustments

Warranty claims must be made promptly and received by your nearest authorized Welch Allyn / Kreativ service representative during the warranty period. The liability of Kreativ Inc., under valid warranty claims, is limited to repair or replacement at the purchaser's authorized Welch Allyn / Kreativ Service Center or the purchaser's place of business, at the option of the authorized service representative. If it is necessary to return a product for repair or replacement, authorization for the return must first be obtained from the authorized service representative

All products returned for examination or warranty repair must be sent insured via a means of transportation specified by the authorized service representative.

Kreativ, Inc., or its authorized service representative claims the sole responsibility for determining the cause of any instrument failure.

Limited Warranty

Kreativ Inc. warrants the equipment to be free from defects in material and workmanship for a period of 12 months from the date of shipment. Damage due to failure of customer to perform required user/preventive maintenance is not warranteed. Certain components having limited life expectancy (bulbs, handpieces and liquid light guides) are not warranteed against normal wear and tear or customer damage. This limited warranty applies only to the original purchaser / user of the equipment.

The foregoing limited warranty is exclusive and in lieu of all other warranties, whether written, oral, or implied, and shall be purchaser's sole remedy and Kreativ's sole liability under contract or warranty or otherwise for the product.

Kreativ, Inc. disclaims any implied warranty of merchantability or fitness for particular purposes. In no event shall Kreativ, Inc. be liable for any incidental or consequential damages, or for any incidental or consequential damages arising out of, or in connection with, the use or performance of the product delivered hereunder.

Storage And Shipment

The Kreativ Kuring Light has been designed for long term usage in normal dental office environments. If it is to be stored for any reason for a long period, it should be covered to protect it from adverse conditions. The area it is to be stored in should meet the Environmental Limitations Transport and Storage Requirements indicated in the Specifications section of Chapter 1.

The unit has been designed for shipment by normal commercial carriers. Protective packaging should be used, and the original packing materials should be reinstalled for shipment. Shipping instructions must be followed closely. The customer will be responsible for damage resulting from improper packing.